

AMENDMENTS TO THE CLAIMS

1-31. (Cancelled)

32. (Previously presented) The composition of claim 49, wherein said peripheral tissue comprises olfactory epithelium.

33. (Previously presented) The composition of claim 49, wherein said peripheral tissue comprises tongue.

34-40. (Cancelled)

41. (Previously presented) The composition of any of the claims 49-52, wherein said neural stem cells are transfected with a heterologous gene.

42. (Previously presented) The composition of claim 41, wherein said gene encodes a trophic factor.

43-48. (Cancelled)

49. (Currently amended) A [An isolated] composition [of] comprising an isolated population of neural stem cells of a mammal, said stem cells produced by a method comprising the steps of:

(a) providing a culture of peripheral tissue containing sensory receptors from said mammal;

(b) isolating neural stem cells from said peripheral tissue, based on the tendency of said neural stem cells to aggregate and form non-adherent clusters in culture, wherein said neural stem cells express nestin, are self renewing, are capable of producing neurons and glia, and can differentiate into dopaminergic neurons.

50. (Currently amended) A [An isolated] composition comprising an isolated [a purified] population of mammalian neural stem cells, which neural stem cells form non-adherent clusters in culture, are self renewing, express nestin and glutamic acid decarboxylase (GAD), and can differentiate into cell types of the central nervous system.

51. (Currently amended) A [An isolated] composition an isolated [comprising a purified] population of mammalian neural stem cells, which neural stem cells form non-adherent clusters in culture, are self renewing, express nestin, and can differentiate into dopaminergic neurons.

52. (Currently amended) A [An isolated] composition comprising an isolated [a purified] population of mammalian neural stem cells, which neural stem cells form non-adherent clusters in culture, are self renewing, proliferate in an EGF-independent manner, and can differentiate into cell types of the central nervous system.

53. (Cancelled)

54. (Previously presented) The composition of claim 50, which neural stem cells can proliferate in an EGF-independent manner.

55. (Previously presented) The composition of claim 54, which neural stem cells differentiate, in the presence of serum, into neurons expressing tyrosine hydroxylase.

56. (Previously presented) The composition of any of the claims 49-54, which neural stem cells differentiate into cells expressing at least one marker selected from the group consisting of Glial Fibrillary Acid Protein (GFAP), neurofilament 160, β III tubulin, NeuN, galactocerebroside, tyrosine hydroxylase, and dopamine β -dehydrogenase.

57. (Previously presented) The composition of any of the claims 49-54, which neural stem cells differentiate, in the presence of serum, into dopaminergic cells.

58. (Previously presented) The composition of any of the claims 49-54, which neural stem cells are human stem cells.

59-63. (Cancelled)